

# MANUFACTURING EXTENSION PARTNERSHIP

## Success Stories from the Field

### **N P C, Inc.**

#### **Mid-Pennsylvania Manufacturing Extension Partnership**

#### **Office Mapping Project**

##### **Client Profile:**

NPC, Inc. is a full service document solutions provider located in Claysburg, Pennsylvania. The company is privately owned and operated by the second generation of the Barnhart family. Almost 50 years old, NPC employs more than 400 people in positions ranging from information technology to shipping and receiving.

##### **Situation:**

NPC wanted to apply Office Value Stream Mapping techniques to their operation as part of the lean transformation. Process Mapping is a popular method originally developed to visually diagram administrative flows. The use of these techniques has been expanded into any support or office process including customer service, maintenance, invoicing and personnel functions due to its versatility and usefulness. Process maps are now used routinely across the breadth of America's industrial landscape. A process mapping event was required to train on these techniques and develop a present state map, as well as a future state map. NPC contacted the Mid-Pennsylvania Manufacturing Extension Partnership (MANTEC), a NIST MEP network affiliate, for assistance.

##### **Solution:**

MANTEC assigned a cross-functional team to develop a current state map that depicts the flow of value throughout the organization. The current state map included all the steps, both value added and non-value added, that are required to bring customer orders through a provider's value stream. The purpose of the current state map was to define and highlight sources of process waste so that the team can develop improvements that will eliminate, simplify, incorporate or reduce the tasks. After the current state map was complete, the team developed a future state map. The goal was to build a chain of tasks where the individual processes were linked to their customers (either internal or external) either by continuous flow or pull. Also, each process produces only what its internal customers need and only when they need it. The team then applied various lean concepts such as standardized work, quality management, batch reduction, pull replenishment, workplace organization, cellular systems and visual controls. The team identified the potential benefits of each of these concepts in terms of total cycle time, on-time delivery, system-wide productivity and other measures. The future state process map can represent a series of significant changes to company operations. So, this final step addressed the journey that gets us to the improved system. The future state map was divided into manageable pieces known as process loops. These specific segments of the value stream will be addressed sequentially over time. Breaking down the entire process into several smaller loops helps to make a complex process more understandable for project participants and non-participants as they embark on the improvement process. The mapping process allows team members to experiment in a low-risk and creative environment that unifies team members' ideas into a common view of the future state, while measuring the impact of potential improvements.

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The object of this entire process was to generate improvements that result in a significant reduction in lead times, inventory and floor space, an increase in productivity and improvements in product quality. The future state map also serves as a powerful visual tool for communicating the improvement process for the entire organization.

### Results:

- \* Gained understanding of office process wastes.
- \* Learned how to improve office productivity by applying lean system improvements.
- \* Developed future state map as a visual tool for communicating improvement process for entire organization.
- \* Anticipated improvements in lead times, inventory and floor space, productivity, and product quality after implementation plan is created.

### Testimonial:

"It's pretty amazing what can be unveiled during an Office Mapping Project. The first day, I seriously doubted that the process was going to have any impact whatsoever. After seven years invested in our product line, always involved in a continual cycle of improvement, and using empowered employees as our problem solvers, I believed we were already Lean. Skeptical, you bet I was; yet another exercise in futility. Mapping our office workflow enabled me to visualize our workflow as if it were the first time I was seeing it. It opened up the possibilities of "what if's." What if I re-sequence switch these two processes? What if I can automate this other process? What if I open up to other possibilities rather than be skeptical? I know that one process change has tremendous potential to help us attain our sales goals and improve the quality of the projects as well. It's only a day after our third meeting and we are improving some computerized tasks within the workflow...you just got to love it...fast to implement. Someone considering an Office Process Mapping project should avoid coming in with preconceived ideas of what a mapping project is. Allow the process to unfold a step at a time. And don't believe your own advertising; you may not be as lean as you think you are. Finally, don't rush the improvement process; you have to spend time to save time. Thanks for the workshop, and the excitement generated."

Mike Novotny, Production Manager